PTR
printing temperature recorder

User Manual

order code:
226-275 (type K) or 227-275 (type T)

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INTRODUCTION

The PTR (Printing Temperature Recorder) is a hand held temperature measuring device that prints and logs temperature readings.

The PTR type K measures °C across entire range of -100 to 1372 °C (type T -100 to 400 °C) with an LCD that displays a 0.1 °C resolution up to 299.9 °C thereafter 1 °C. °F measures from -148 to 1999.9 °F with a 0.1 °F resolution, thereafter 1 °F (downloaded data will read 0.1 °C/°F resolution over the entire range).

When the PTR is fully charged, up to 500 prints can be achieved. Up to 8000 readings per channel, can be stored in the memory.

PROBES

The PTR can be used with the standard range of ETI thermocouple probes fitted with a miniature thermocouple plug. The probes are connected via the 4 miniature thermocouple sockets at the top of the instrument.

FUNCTIONS

The PTR control panel consists of five buttons:

ON/OFF - Switches the PTR On/Off.

INPUT - Changes selected input.

LIMITS/START STOP - Displays High or Low Limit in 'on demand' mode. Starts and stops logging in 'log' and 'summary' modes.

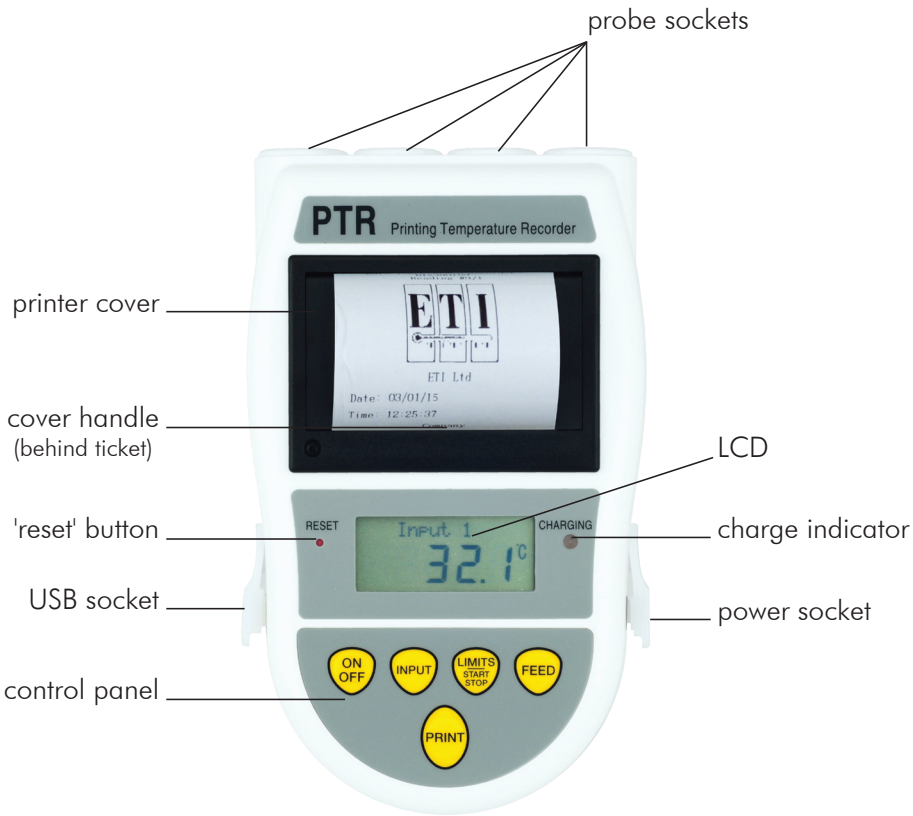
FEED - Feeds the paper.

PRINT - Takes a reading, prints a ticket and logs the reading, date and time in memory.

DISPLAY

The display consists of a 12 character alphanumeric section and a four and a half digit temperature section. Low battery indication is shown by 'Lo Bat'.

PTR OVERVIEW



PTR OPERATION

SWITCHING THE PTR ON OR OFF

The 'On/Off' button switches the PTR on or off. 'Switch off' will be displayed for two seconds before shut down is complete. The unit cannot be switched off using the 'On/Off' button during a log. The log must be stopped first.

CHANGING INPUT

To scroll through the four inputs, press the 'Input' button. The selected input will be displayed on the screen. Inputs change in a continuous loop. Up to four inputs can be selected using the PC software.

DISPLAYING LIMITS

In 'on demand' printing mode the high or low limit for the selected input can be viewed by pressing the 'Limits' button. When the high or low limit is selected the temperature value displayed represents the corresponding limit and the name of the input alternates with 'High Limit:' or 'Low Limit:'.

FEEDING PAPER

Press the Feed button to feed the paper. If there is no paper loaded or the printer cover is open, 'Paper out' will be displayed for five seconds.

MODES OF OPERATION

The instrument has six modes of operation, 'on demand', 'log do not print', 'Logging', 'print log summary using print button', 'print current temperature using print button' and 'print log summary and current temperature using print button'.

'ON DEMAND' MODE (Untick 'logging')

When the print button is pressed a temperature measurement will be taken from all selected inputs and a ticket containing the current temperature values along with whether the current readings exceeded limits will be printed. If there is no paper loaded or printer cover is open, 'Paper out' will be displayed for five seconds, but the reading will still be stored. After a ticket has been printed, the display will show 'Copy' for five seconds. Pressing the 'Print' button during this time prints a copy of the last ticket. In 'on demand' mode all button functions are retained.

LOGGING - 'DO NOT PRINT' MODE

The print button is disabled, and the LIMITS/START STOP button is used to start and stop logging. To start logging, press the START STOP button once. To stop logging press the START STOP button, 'Stop Log?' will be displayed. Press the START STOP button again to confirm the log is to be stopped. The log MUST be stopped before the instrument can be switched off.

LOGGING - 'PRINT EACH LOG AUTOMATICALLY' MODE

The print button is disabled and the printing is automatically timed at set intervals selected by the user. If there is no paper loaded or the printer cover is open, 'Paper out' will be displayed, but the reading will still be stored. When a roll of paper is placed in the instrument and the printer cover is closed, the stored readings will be retrieved and printed in sequence.

When 'log mode' is first set-up with the PC software the instrument will display 'ready'. All button functions are retained. The LIMITS/START STOP button is used to start and stop logging. To start logging press the START STOP button once. To stop logging press the START STOP button, 'Stop Log?' will be displayed. Press the START STOP button again to confirm the log is to be stopped. Once a log has been started the log MUST be stopped before the instrument can be switched off.
All stored readings can be retrieved later using the Printing thermometer PC software.

LOGGING - 'PRINT LOG SUMMARY USING PRINT BUTTON' MODE

When the print button is pressed, the alarm limits and the number of alarm activations per input will be printed. If there is no paper loaded or the printer cover is open, 'Paper out' will be displayed for five seconds, but the reading will still be stored. In 'summary' mode all button functions are retained except the 'on/off' button. The LIMITS/START STOP button is used to start and stop logging. To start logging press the START STOP button once. To stop logging press the START STOP button, 'Stop Log?' will be displayed. Press the START STOP button again to confirm the log is to be stopped. The log MUST be stopped before the instrument can be switched off.

LOGGING - 'PRINT CURRENT TEMPERATURE USING PRINT BUTTON' MODE

When the print button is pressed the current temperature is measured, and then a ticket is printed with this information along with any alarm activations. If there is no paper loaded or the printer cover is open, 'Paper out' will be displayed for five seconds, but the reading will still be stored. The LIMITS/START STOP button is used to start and stop logging. To start logging press the START STOP button once. To stop logging press the START STOP button, 'Stop Log?' will be displayed. Press the START STOP button again to confirm the log is to be stopped. The log MUST be stopped before the instrument can be switched off.

LOGGING - 'PRINT LOG SUMMARY AND CURRENT TEMPERATURE USING PRINT BUTTON' MODE

When the print button is pressed the current temperature is measured, the alarm limits and the number of alarm activations per input will be printed. If there is no paper loaded or the printer cover is open, 'Paper out' will be displayed for five seconds, but the reading will still be stored. The LIMITS/START STOP button is used to start and stop logging. To start logging press the START STOP button once. To stop logging press the START STOP button, 'Stop Log?' will be displayed. Press the START STOP button again to confirm the log is to be stopped. The log MUST be stopped before the instrument can be switched off.

BATTERIES

The PTR is fitted with a 3 cell rechargeable 3.6V NiMh battery pack. It is NOT user replaceable. Please return to the ETI Service Department for battery replacement. When the PTR power is low, the 'Lo Bat' segment of the LCD is lit. Print and feed operations are inhibited when 'Lo Bat' is indicated. Pressing the 'Print' or 'Feed' buttons will result in 'Recharge' being displayed for a short time in the display.

RECHARGING THE PTR

To recharge the PTR remove the rubber cap and plug the power cable into the socket on the right of the instrument. A flashing 'Charging' LED indicates that the device is being charged.
A slow flashing LED (once/second) indicates normal charging. A fast flash rate (four times/second) indicates a charging fault (probably the batteries are too cold to charge).

The PTR should only be recharged in an ambient temperature between 5 and 40 °C (41 and 104 °F).

Charge only with an ETI PTR power supply - 12V, 3.3A (40Watt). Damage may occur if other power supplies are used.

CONNECTING DEVICE TO THE PC

To connect the PTR to a PC remove the rubber cap and plug the USB cable into the socket on the left side of the instrument. Use the Printing Thermometer PC software to customise PTR settings and ticket layout and to download stored reading.

RESET

If the PTR fails to respond, press the 'reset' button on the front of the instrument which is situated to the left of the display.

CLEANING

Clean only the outside of the instrument with a damp cloth or anti-bacterial wipe.

PAPER LOADING PROCEDURE

To reload the printer with a new paper roll, follow the steps below:

1. Un-clip the printer cover handle (fig 1).
2. Pull the printer cover handle until the cover un-clips. To avoid damage to the handle do not use excessive force (Fig 2).
3. Lift the lid until completely open (fig 3).
4. Remove any existing paper or the plastic tube from the previous roll. The easiest way to do that is to turn the PTR upside down, so the printer contents fall out (fig 4).
5. Prepare a new paper roll - remove the outer packaging and the holding sticker. Place into printer as shown in Fig 5. The glossy side of the paper should be against the printing mechanism
6. Push the paper fully into the printer housing (fig 6).
7. Close the lid, leaving a short strip of the paper roll protruding from the printer (fig 7).
8. Lock the cover by pressing shut. Push the printer cover handle shut (fig 8).

fig 1

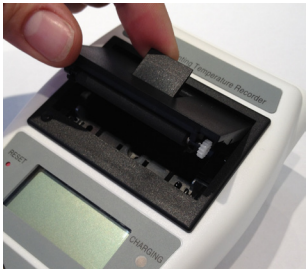


fig 2

fig 3

fig 4

fig 5

fig 6

fig 7

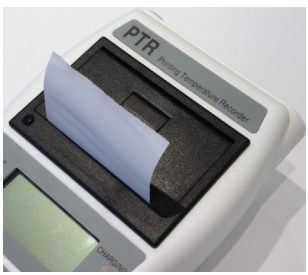


fig 8

SPECIFICATION

range - type K t/c	-100 to 1372 °C (-148 to 2501 °F)
range - type T t/c	-100 to 400 °C (-148 to 752 °F)
operating temp range	5 to 50 °C & 10 to 80 %rh
resolution °C	0.1 °C to 299.9 °C thereafter 1 °C
resolution °F	0.1 °F over the range of -148 °F to 1999.9 °F, thereafter 1 °F
accuracy - type K & T t/c	±0.4 °C ±0.1 % of reading
memory	32000 or 4 x 8000 readings
sample rate	0.1 to 255 minutes
battery	Ni-MH 3.6 volt rechargeable
battery life	approximately 500 prints from a full charge
battery charging temp range	5 to 40 °C
battery charging cycles	>500
charging power supply	INPUT 100-240V - 47-63Hz 1-1A Max OUTPUT 12V, 3.3A (40Watt)
sensor type	type K or T thermocouple
connector type	miniature thermocouple
printer type	thermal
paper width	57 mm
paper roll diameter	Ø30 mm maximum
print lines per roll	2000 approx. (Ø30 mm roll)
display	12.7 mm LCD & 12 character alphanumeric
dimensions	54 x 110 x 183 mm
weight	629 grams
IP rating	IP2X

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

PLEASE NOTE: Due to regular software updates, please visit the download page on our website etiltd.com/downloads to ensure you have the latest version.

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